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EXAMINER	
WANG, TED M	

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2611	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/633,846	RASTEGAR ET AL.	
	Examiner	Art Unit	
	Ted M. Wang	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 June 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, filed on 06/29/2007, have been fully considered but they are not persuasive. The Examiner has thoroughly reviewed Applicants' arguments but firmly believes that the cited reference to reasonably and properly meet the claimed limitations.

Claims 1-9

Applicants' argument – "(a) In contrast, the claimed invention transmits the actual data, but the data is transmitted in bits and pieces at times determined by a pseudo random number generator, which the receiver that has the code (called the seed) can figure out the time sequence and use only the signal bits and pieces (pulse like) that are received at those times to reconstruct the data sequence. As discussed in the specification, this is good for hiding the signal in the environmental noise, thereby it would be also good for preventing anyone from finding the transmitter (in the field, for example).

(b) The prior art cited by the Examiner discloses a method that generates the random noise and the pseudo noise (PN) code sequence is used to clean, which means that it would be very easy to find the transmitter since it is sending a continuous signal. In addition, in the claimed invention, since only randomly distributed pulses are sent, it is very difficult for anyone to zero in on and locate the transmitter since it is hard to tune to a randomly timed sequence of pulses.

(c) With regard to the rejection of claims 1-9 under 35 U.S.C. § 102(b), a method, transmitter, receiver and system for low-delectability communication having the

features discussed above and as recited in independent claims 1 and 7-9, is nowhere disclosed in Schuermann." as recited in page 8, line 5 – page 9, line 8 of the remark, dated 06/29/2007.

Examiner's response –

In response to applicant's arguments (a) and (b) that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e. (a) - page 8, lines 9-15 of the remark, (b) - page 8, lines 18-21 as recited in the above paragraph) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to applicant's argument (c), Examiner considers that any system having data being spreaded by a PN spreading code and later, modulated with BPSK or FSK scheme, then transmitted via air is a low-delectability communication between transmitter and receiver since the received signal at receiving side will be the transmitted signal plus white noise (transmitted via air). Schuermann discloses such a system (refers to Fig.1 -3).

Thus, for the explanation addressed in the above paragraph, the rejection under 35 U.S.C. 102(e) with Schuermann's reference is adequate.

Claims 10-11

Applicants' argument – "Independent claims 10 and 11 are not rendered obvious by the cited references because neither the Schuermann patent nor the Poon patent,

whether taken alone or in combination, teach or suggest a program storage device or computer program product having the features discussed above and recited in independent claims 10 and 11." as recited in page 9, lines 11-14, of the remark, dated 06/29/2007.

Examiner's response – The argument is the same as that of claims 1-9. The Examiner's response has been addressed in the above paragraph.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Schuermann et al. (US 6,198,764).

- With regard claim 1, Schuermann et al. discloses a method for the transfer of a digital data signal from a transmitter to a receiver comprising:

(a) transmitting first data (Fig.1 element 10, data source) from the transmitter according to at least one of a first timing (Fig.1 element 12, PN generator output, B – PN-code sequence (Fig.2 element B), and column 3 lines 1-6), modulation, and frequency;

(b) appending the first data (Fig.1 element C, spreaded data according to the PN code sequence), prior to transmission (Fig.1 element 24), with information (Fig.1 element 18, FSK modulator output) regarding at least one of a second timing, modulation (Fig.1 element 18, FSK modulator), and frequency for a subsequent transmission (column 2 lines 31-48) and column 3 lines 11-16); and

(c) transmitting second data from the transmitter (Fig.1) according to the information (column 2 lines 22-48, where the BPSK modulation output, D, is transmitted according to the information from FSK output)

- With regard claim 2, Schuermann et al. further discloses wherein the information comprises a change in at least one of the first timing, modulation, and frequency (Fig.1 elements 12, 16 and 18, column 3 lines 11-16, Fig.2 element D, RF signal, f_1, f_2 and f_1).
- With regard claim 3, Schuermann et al. further discloses wherein the change comprises a random generation (Fig.1 element 12) of the at least one of the first timing (Fig.1 elements 12, 16 and 18, Fig.2 elements A-D, and column 3 lines 11-30), modulation, and frequency.
- With regard claim 4, Schuermann et al. further discloses wherein the information comprises a deviation in at least one of the first timing, modulation, and frequency (Fig.1 elements 12, 16 and 18, Fig.2 elements A-D, and column 3 lines 11-30, where as PN sequence changed the synchronization information at output of FSK is changed).
- With regard claim 5, Schuermann et al. further discloses wherein the

information comprises at least one of the second timing, modulation, and frequency (Fig.1 elements 12, 16 and 18, and column 2 lines 31-35 and column 3 lines 11-30, where the appended information to the first data is the synchronization information generated by elements 12).

- With regard claim 6, Schuermann et al. further discloses repeating steps (b) and (c) for subsequent data sets. (Fig.1 elements 12, 16 and 18, column 3 lines 11-30, and Fig.1 and Fig.2 elements A-D, since the PN code is a continuous sequence, the second data and subsequent data set along with the new generated synchronization information is transmitted to the receiver.)
- With regard claim 7, which is a mean plus function claim related to claim 1, all limitation is contained in claim 1. The explanation of all the limitation is already addressed in the above paragraph.
- With regard claim 8, Schuermann et al. discloses a receiver comprising:

  means for receiving first data from the transmitter at least one of a first timing, modulation (Fig.3 and column 3 lines 45-55), and frequency, the first data containing information regarding at least one of a second timing, modulation, and frequency for a subsequent transmission (Fig.2 &3 element E and column 3 line 56);

  means for reading the information in the first data (column 4 lines 1-7, where the information is the synchronization information, PN-code sequence); and

  means for receiving the second data from the transmitter according to the information (Fig.2 and 3 and column 3 lines 45-55, since the PN code is a

continuous sequence, the second data along with the new generated synchronization information is transmitted and been received by the receiver.)

- With regard claim 9, which is a system mean plus function claim related to claim 7, means plus function of a transmitter, and claim 8, means plus function of a receiver, all limitation is contained in claim s 7 and 8. The explanation of all the limitation is already addressed in the above paragraph.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuermann et al. (US 6,198,764) in view of Poon et al. (US 6,192,070).

- With regard claims 10 and 11, Schuermann et al. discloses all of the subject matter as described above except for the method written by a software program embodied in a computer-readable medium.

  However, Poon et al. teaches that the method and apparatus for a universal modem with different modulation/demodulation type information can be implemented in software stored in a computer-readable medium (column 4 lines 15-39). The computer-readable medium is an electronic, magnetic, optical, or other physical device or means that can be contain or

store a computer program for use by or in connection with a computer-related system or method. One skilled in the art would have clearly recognized that the method of "Schuermann et al." would have been implemented in a software. The implemented software would perform same function of the hardware for less expense, adaptability, and flexibility. Therefore, it would have been obvious to have used the software in "(column 4 lines 15-39)" as taught by Poon et al. in order to reduce cost and improve the adaptability and flexibility of the communication system.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

7. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted M. Wang whose telephone number is 571-272-3053. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ted M Wang
Examiner
Art Unit 2611

Ted M. Wang